

### **ABSTRACT OF THE DISCLOSURE**

The present invention relates to a method for detecting a line-to-line fault location in power network, and more particularly, detecting the line-to-line fault location by direct 3-phase circuit analysis without using a symmetrical component transformation, so even in an unbalanced 3-phase circuit, the line-to-line fault location can be accurately detected. In the method using direct 3-phase circuit analysis of this invention, inverse lemma is used to simplify matrix inversion calculations, thus the line-to-line fault location can be easily and accurately determined even in the case of an unbalanced network without symmetrical component transformation.